

1. System for measuring a horizontal deviation (A) of a load receiving element (2) in relation to a position of a hoist travelling trolley (1), wherein the load receiving element (2) being suspendedly arranged on a plurality of supporting cables (10a, 10b, 10c, 10d) on the hoist travelling trolley (1) consisting of at least two cable length sensors (3, 4) which are operatively connected to a data processing means (S) and the cables (8, 9) of the at least two cable length sensors (3, 4) are arranged between the hoist travelling trolley (1) and the load receiving element (2) in such a way that a computer unit which is connected to the data processing means (S) determines the horizontal deviation (A) of the load receiving element (2) in relation to a position of a hoist travelling trolley (1) for the length of the respective cables (8, 9) of cable length sensors (3, 4).
2. System according to claim 1, wherein the cables (8, 9) of the at least two cable length sensors (3, 4) are arranged in such a way that the length of the cable (8) of the first cable length sensor (3) decreases compared to the state without horizontal alignment due to a horizontal deviation of the load receiving element, while at the same time the length of the cable (9) of the second cable length sensor (4) increases.
3. System according to claim 2, wherein the at least two cable length sensors (3, 4) are arranged in such a way that their cables (8, 9) are intersecting.
4. System according to claims 1 to 3, wherein at least one of the cable length sensors (3, 4) is arranged on the hoist travelling trolley.
5. System according to claims 1 to 3, wherein at least one of the cable length sensors (3, 4) is arranged on the load receiving element.

6. System according to any one of the aforementioned claims, wherein the cable length sensors (3, 4) are not arranged on the same side of the hoist travelling trolley (1) or the load receiving element (2).

- 10 7. System according to any one of claims 1 to 6, wherein one of the at least two cable length sensors (3) is arranged in a front part of the hoist travelling trolley (1) and whose cable (8) essentially extends diagonally to an anchorage point (5) to a rear part of the load receiving element (2), whereas the other of the at least two cable length sensors (4) is arranged at a rear part of the hoist travelling trolley (1) and whose cable (9) essentially extends diagonally to an anchorage point (6) in a front part of the load receiving element (2).

- 15 8. System for measuring a horizontal deviation (A) of a load receiving element (2) in relation to a position of a hoist travelling trolley (1), wherein the load receiving element (2) being suspendedly arranged on a plurality of supporting cables (10a, 10b, 10c, 10d) on the hoist travelling trolley (1), particularly using a system according to any one of the above claims, consisting of the steps:

- 25 - Measurement of a first diagonal distance between a rear part of the hoist travelling trolley (1) and a front part of the load receiving element (2) and simultaneous measurement of a second diagonal distance between a front part of the hoist travelling trolley (1) and a rear part of the load receiving element;
- Transmittal of the two measured values to an electronic data processing means;
- Insertion of the two measured values into a predetermined algorithm stored in a computer unit connected to the electronic data processing means;
- 30 - Determination of an initial value which is equivalent to the horizontal deviation (A) of the load receiving element (2) in relation to the hoist travelling trolley (1).

- 35 9. Method for measuring a horizontal deviation (A) of a load receiving element (2) in relation to a position of a hoist travelling trolley (1), wherein the load receiving element (2) being suspendedly arranged on a plurality of supporting cables (10a, 10b, 10c, 10d) on the hoist travelling trolley (1), particularly using a system according to any one of the above claims, consisting of the steps:

- 5           -     Measurement of a first distance between the rear part of the hoist travelling trolley (1) and a central part of the load receiving element (2) and simultaneous measurement of a second distance between a front part of the hoist travelling trolley (1) and the central part of the load receiving element;
- Transmittal of the two measured values to an electronic data processing means;
- 10          -     Insertion of the two measured values into a predetermined algorithm stored in a computer unit connected to the electronic data processing means;
- Determination of an initial value which is equivalent to the horizontal deviation (A) of the load receiving element (2) in relation to the hoist travelling trolley (1).

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10. Method according to claims 8 or 9, wherein the initial value is an angular value ( $\alpha$ ).

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11. Use of at least two cable length sensors, particularly according to a method of claims 8 or 9, for measuring a horizontal deviation (A) of a load receiving element (2) in relation to a position of a hoist travelling trolley (1), wherein the load receiving element (2) being suspendedly arranged on a plurality of supporting cables (10a, 10b, 10c, 10d) on the hoist travelling trolley (1) consisting of at least two cable length sensors (3, 4) which are operatively connected to a data processing means (S) and the cables (8, 9) of the at least two cable length sensors (3, 4) are arranged between the
- 25           hoist travelling trolley (1) and the load receiving element (2) in such a way that a computer unit which is connected to the data processing means (S) determines the horizontal deviation (A) of the load receiving element (2) in relation to a position of a hoist travelling trolley (1) for the length of the respective cables (8, 9) of cable length sensors (3, 4).

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